THE

HORTICULTURIST.

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Classification of Fruits.

In a recent number of the *Gardener's Monthly* appeared some very sensible remarks by the editor on the classification of fruit. The subject has been running through our own mind for some time past, and we would say something to fix the attention of pomologists, if possible, on this important point. In common with the editor of the *Monthly*, we would do something to remove the obscurity that now surrounds the classification of fruit. Obscure it is to a most lamentable degree. The novice in fruit culture must often find himself sadly at a loss to identify his fruits; and even those well versed in pomological technicalities can not always, under present circumstances, be quite sure that the fruit described and the one before them are the same. This uncertainty arises from several causes, such as the variations in the same fruit, the mode of describing it, the period of maturity at which it is described, want of uniformity among writers, &c. Some will describe a fruit at full maturity; others, while it is still immature. Some will select the largest and finest specimen; others, any specimen that comes to hand. Some will employ one set of terms; others, another.

In order to avoid some of these difficulties, the editor of the *Monthly* suggests that well-known forms be employed as types. For example, a pear that resembles the Bartlett in form shall be designated as Bartlett-shaped. This suggestion is a good one, though it does not meet all the difficulties of the case. The Bartlett, however, being a generally known variety, the novice, on being told that another pear is Bartlett-shaped, gets a very much better idea of it than if he is told it is "obovate pyriform," or "obtuse pyriform," or "irregularly pyriform," or "truncate conic," or "turbinate," though the pyriform is one of the easiest of all forms to recognize. The difficulties are greatly increased to the novice when we come to "obovate, inclining to conic, remotely pyriform," or "roundish, obliquely oblate, angular," or "truncate conic, pyramidal, angular," or "truncate conic, very obtuse pyriform," &c. In many such cases the description is made obscure by being overdone. There is too much of it. It would not do, of

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course, to ignore scientific description, but it might at least be made precise and clear. If the idea of types be used in addition to a brief but precise scientific description, there can be no doubt that a greater degree of clearness would be attained. If, for example, we say, "irregularly pyriform, or Bartlett-shaped," or "roundish obovate, or Bergamotte-shaped," the novice apprehends our meaning much more readily than if we say "irregularly pyriform" or "roundish obovate."

Then, again, more clearness would be attained if all writers on pomology would agree to use the same terms and the same manner of description. Much of the obscurity complained of arises from this want of agreement. We think this is a matter that justly comes within the province of the American Pomological Society. If the Society would set forth a clear and precise mode for describing fruits, we have no doubt that all would adopt it. We commend the subject to their serious consideration. If we can be present, as we expect to, we shall bring it before the next meeting. In the mean time, we shall recur to it again, and give some illustrations.

MILDEW ON THE GRAPE-VINE.—I.

BY HORTICOLA.

A FEW days ago I received a very interesting letter from Mr. *L. A. Neubert*, the celebrated vine-grower at *Leipzic*, in Saxony. He commenced as an amateur, collecting as many varieties of the vine as he was able to obtain from reliable sources, and tested them critically, until he was, at last, persuaded to sell them. The King of Saxony visited his establishment repeatedly, and honored him with a gold medal for his well-conducted nursery. Mr. *Neubert* is a scientific chemist; and for this reason I attach the more weight to his experience in the treatment of the grape-vine disease.

About two years ago he expressed, in a letter to me, his belief, that what we used to call *mildew*, is nothing but the *Oidium Tuckeri*, so widely spread in the vine-growing countries of Europe. In this belief all vine-dressers share whom I have had an opportunity of seeing, and who had left Europe after that disease had broken out there. Be this as it may, I hasten to translate that part of Mr. *Neubert's* letter which relates to the *oidium*, hoping that it will be read by many with interest, and that it will be a benefit to such as wish to combat so cruel an ememy in good earnest. The letter is dated Leipzic, March 6, 1864. It reads:

"Now I come to a matter most important to you; it is that pernicious disease called *mildew* by you. I have struggled with it for four or five years, and have had many a sleepless night on account of the grapes lost by it. Now, however, I am confident that all the cares arising from that disease are at an end.

"I. Treatment of the vines *before* the leaves appear. Syringe them thoroughly, also the walls, posts, stakes, trellises, etc., with the following mixture. Take 8½ ounces of common salt, 4 ounces of saltpetre, and 36 ounces of water, and add 10 drops of Oleum Anthos and 10 drops of Oleum Lavendulæ to the solution, shaking it well. Take one part of the solution, and from 100 to 120 parts of water. Immediately before using it, it must be vigorously shaken, on account of the oils, which, of course, easily separate from it.

"II. When they are in leaf. *Sprinkle them thoroughly with flour of sulphur*,

"1. As soon as the leaves begin to appear.

"2. As soon as they are in blossom.

"3. As soon as the berries are of the size of peas.

"4. As soon as they commence coloring.

"Afterwards all diseased berries are to

be removed, or the dusting with flour of sulphur is once more to be applied.

"You know, no doubt, that certain instruments for that purpose have been invented. The one is a bellows; the other, for dusting the upper surface of the leaves, is called the grape-vine torch.

"My eldest son saw, last year, in Botzen, (Tyrol,) vineyards treated with sulphur, in the greatest possible luxuriance and vigor, while others adjoining them, and not so treated, were totally affected by the disease.

"Last summer I found but a few berries showing the disease, in my vineyard."

Mr. Neubert's directions are clear and to the point. They do not differ from those of *Dubreuil* in his "Culture Perfectionée du Vignoble," p. 173, except that he does not require the syringing before the vines are in leaf. Besides, he wants but three sprinklings with sulphur; yet, which is very important, *when the vines are perfectly dry*, in fine, calm weather; for the sulphur is much more efficacious when neither dew nor rain is on the vines, than when they are wet or even moist. The sprinkling must, therefore, be immediately repeated, should it soon rain after the application. *This has been proved beyond a doubt in France.*

In his *Cours d'Arboriculture*, published in 1857, the same author is less explicit and circumstantial than in the "Culture Perfectionée," published in 1863. But while he maintains, in the latter work, that *powdered sulphur* is as good as flour of sulphur, he says, in the former, that flour of sulphur is very much better than pulverized sulphur.

Guyot's plan differs very much from that of *Dubreuil*. The second edition of his *Culture de la Vigne* was published in 1861. He says on p. 16, that every year, from the 15th of April to the 30th of May, pulverized *sulphate of iron* must be thrown broadcast in the proportion of 40 kilograms to each hectare of vineyard, and among vines affected by the disease, 20 kilograms of flour of sulphur besides. On p. 151, he advises to sprinkle 20 kilograms of sulphur broadcast along the rows of the vines, and to place two grams of sulphate of iron at the base of each vine, *if the vineyard is situated in a region infested by the disease.* This is to be performed after the first hoeing or plowing.

Dubreuil asserts somewhere in his works that sprinkling the vines, during the time they are in blossom, with sulphur, prevents entirely the rot.

A French *hectare* is about *two acres*, a *kilogram two pounds three ounces*, and a *gram* 15½ grains.

In another article we will describe the implements used for syringing in France.

Oleum Anthos is oil (essence) of Rosemary; Oleum Lavendulæ is oil (essence) of Lavender.

[Last month we published an article treating of the supposed causes or conditions which produce mildew. This month we publish one treating of the cure of the disease. Sulphur, as a remedy, has long been recognized. It was found, in Portugal, to be most efficacious when mixed with lime. The disease, however, when it becomes constitutional, is, in our opinion, beyond cure. The reader will notice some peculiarities in the remedy of Mr. Neubert. We hope our readers will give it a faithful trial; for Mr. Neubert's name carries much weight with it. We thank Horticola for bringing the subject before our readers.—Ed.]

THE WATER APPLE.

BY CHARLES DOWNING, NEWBURGH, N. Y.

ORIGIN, Bucks Co., Penn. Tree, vigorous, wood very dark. Very productive every other year.

Fruit, medium, roundish conical, sometimes oblong conic, inclining to cylindriac, angular. *Skin*, greenish white, shaded

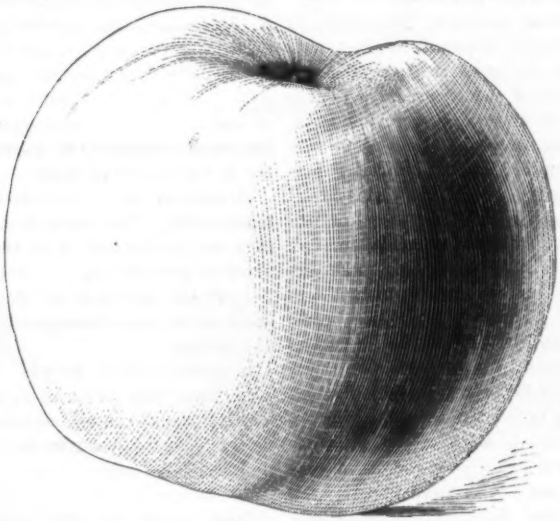


Fig. 1.—*Water Apple.*

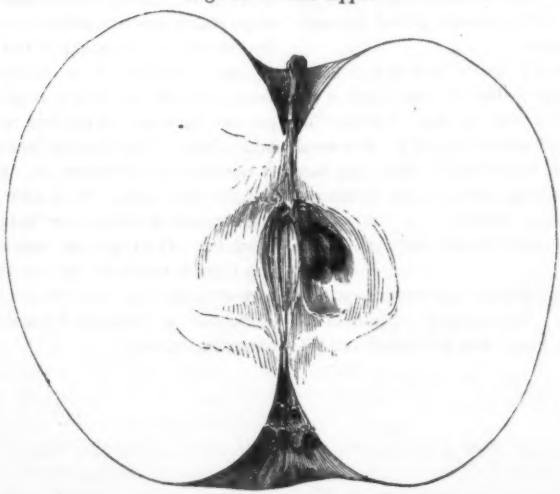


Fig. 2.—*Section.*

with purplish crimson in the sun, and thickly sprinkled with brown dots. *Stalk*, me-

dium or variable, slender, inserted in a narrow cavity, sometimes slightly russeted. *Calyx*, closed; segments long, slender, recurved; basin abrupt, deep, slightly corrugated. *Flesh*, white, crisp, very tender, juicy, with a refreshing, pleasant sub-acid flavor. "Very good," or "best." An excellent amateur fruit, but probably too tender for market purposes.

[We have not seen much of this apple, but we agree with Mr. Downing that it is a very good one. The flesh is very tender. It is in season from October to December. —Ed.]

MARKET GARDENING.

BY A JERSEY MARKET GARDENER.

In your last issue I am taken sharply to task by "A Jerseyman," for my opinions in relation to "Market Gardening," given in your journal over a year ago. Why this Rip Van Winkle of a Jerseyman did not take his exceptions at the time I do not know; possibly it took him these twelve long months to prepare the ponderous arguments he uses to annihilate mine.

"A Jerseyman" is at a loss to know what I seek to prove. I do not think I presumed to *prove* any thing; I only tendered the public that "advice" through the columns of a widely-read journal, that I am too often called upon to give privately. The "advice" was intended only for such as I suppose "A Jerseyman" to be, men who are engaged in other pursuits, and who now and then see illiterate men make a small fortune in this business, and who, pluming themselves on their superior intelligence, and smattering of horticultural theories from "the books," think that *they* can easily, by engaging in the business, make a large one.

I am certain, by the style of "A Jerseyman's" communication, that he is not, nor ever has been, a market gardener, but, in case he intends to become so, (as one may judge by the high estimate he has of the business,) if he will allow me, I will again tender him a little more of that cheap commodity—advice.

He must be under 30 years of age; for much older than that few men can stand long the tear and wear necessary for the market gardener. He must ever put his own shoulder first to the wheel, and make up his mind to rough it through heat and cold, summer and winter, for at least 15 hours a day. He must have a cash capital of not less (in present times) than $400 per acre, for every acre he intends to till. His private expenses, for the first three years, must not exceed those of a common day laborer. Then, if he can secure a favorable site, he may succeed.

Our Jerseyman thinks it a first-rate result that 25 per cent. of all those engaged in the business make money. I do not think so, if we take into account the unusual sacrifices made to obtain it. Mechanics, who are my next neighbors, (carpenters and masons,) complain, that their business is less profitable than mine. At the same time, these knights of the hatchet and trowel, with all their assistants, come soberly to work at seven in the morning, and quit at the first stroke of the bell at six at night, no matter what their hurry may be; while we in summer, with all our force, are out at four (4) in the morning, or as soon as daylight, and leave off again only at sunset; and besides all this, Mr. Jerseyman—to our shame be it told—six days of the week even do not content us, but we must encroach on the Sabbath; for be it known to you, that the fresh vegetables that you purchase in New York for Monday's dinner, are got up early in the morning of Sunday by the market gardeners in the suburbs. The wonder then is, that, with all these sacrifices, it is not more profitable than it is.

Our Jerseyman argues that, from our in-

crease in population, market gardening, from the increased consumption of its products, must of necessity be one of the sure roads to wealth. Any one having common sense knows that there must be the same consumption of the products of shoemakers or tailors, or of butchers or bakers; then why not say that their occupations also are "sure roads to wealth." It requires but little knowledge of the science of political economy to know that the law of supply and demand will ever quickly regulate itself; and in the case of market gardeners, quicker than in many other occupations; for it does not require either skilled or educated labor to be successful in the business. Any sensible man may succeed, after twelve months' routine, if he keeps his eyes open and lays his mind to the work, being perfectly competent; hence knowledge thus easily obtained produces its legitimate results, plenty of competition. So you see, Mr. Jerseyman, if we have millions of consumers in prospective, we have thousands of market gardeners in embryo.

Your correspondent closes with the remark, that "The question, whether a capitalist, a lawyer, merchant, or business man, can attend to his business in town and farm or garden profitably in the country, we propose to discuss at some future time." Now if he will read my article a "fourth" time—he says he has read it thrice—and ponder over it for twelve months more, it will, perhaps, begin to dawn on him that to such, and such only, I volunteered my advice; and my arguments were meant to show that they could not. I have a pretty extensive acquaintance with those engaged in the business in the vicinity of New York, and I have yet to know of the first one from among that class that has "made it pay."

[Merchants and others, who intend to turn market gardeners, will have to thank our correspondents for "both sides of the question."—Ed.]

PLANT HOUSES.—XIII.

BY THE EDITOR.

Our example this month is a plant-house of larger dimensions than any we have heretofore given. Its form was determined by its location. *Fig.* 1 is a perspective.

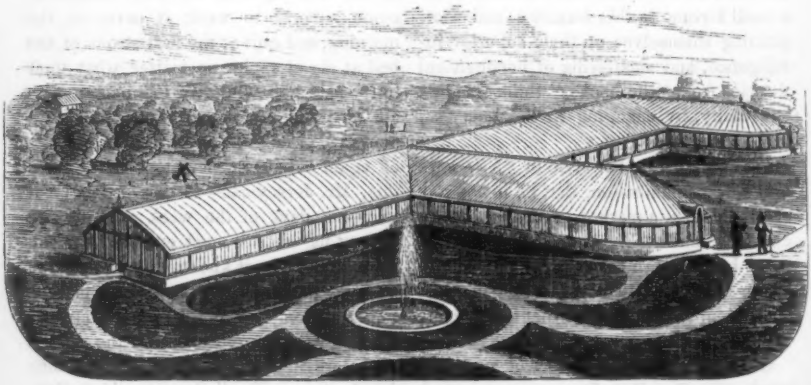


Fig. 1.—*Perspective.*

The principal building runs east and west. This is divided by a brick wall into two unequal parts, that facing the south being the largest, as shown in *Fig.* 2. On

the north side we have first, at the west end, a small Camellia house. It would be

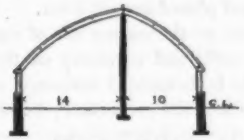


Fig. 2.—Section.

still better adapted to Orchids, or Caladiums, Begonias, &c. Next we have a moderate sized bed-room for the man who attends to the boilers, one of which is in the next room. These two rooms are covered with battened boards instead of glass. On the south of these three rooms is a hot grapery, to be used as a "second" house. Next, on the east, is a house designated "Forcing House" in the plan. (See *Fig.* 3.) It should be "Hot House," as this room is not adapted to forcing purposes. It is intended for plants that require a high

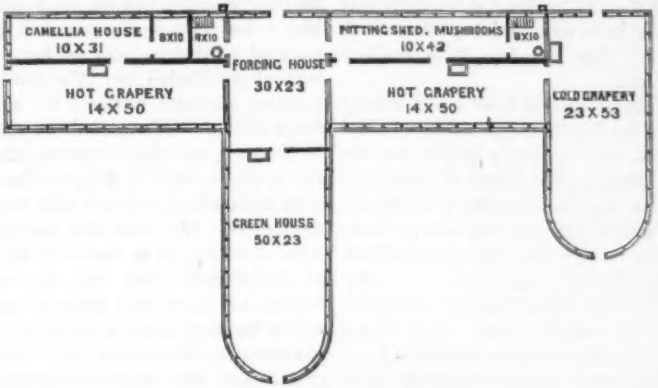


Fig. 3.—Ground Plan.

temperature to keep them in good health. East of this is a room designated "potting shed." Being covered with glass, it is well adapted to growing Mushrooms, propagating plants, &c., all the room not being needed for potting purposes. By the side of this room is another boiler room, and on the south another Hot Grapery, to be used as a "first" house. Then, on the east, is the Cold Grapery, of goodly dimensions. Last of all we have a Greenhouse of large size south of the Hot-house. Thus, under one roof, we have all that is needed on a place of some size and pretension. We do not wish to be understood as saying that it is always best to put these houses in this particular shape. We certainly should not build them in this way for our own use; but where money is no particular object, and architectural effect is sought for, this form, or some modification of it, may be adopted.

THE CURRANT.

BY WILLIAM BACON, RICHMOND, MASS.

The culture of the currant, or, rather, the planting out of currant bushes in the garden, and allowing them to stand there, has been a custom all over the country from its early history. When this labor of *setting out* was once performed, if we take common practice as evidence, the whole work was done, and nothing remained but to gather the fruit in its season, or such portions of it as were left unconsumed by birds, and the matter went on until the next season of fruit gathering.

Planted in fresh soils, their growth was liberal enough for a few years, and the fruit was of satisfactory size. As the bushes showed an ability to take a sort of care of themselves, no pruning system was adopted, except such as was given by the browsing of animals, that in winter had the liberty of trampling the garden grounds, "because they could not do much hurt there." Indeed, even this miserable system of pruning was, thanks to the hardiness of the plants, found to be somewhat beneficial in its way, for it kept the growth restricted, thus enabling it to produce more fruit.

The row of currant bushes was usually set "by the fence" around the garden, and the roots were so closely placed that the plants formed a perfect mass of shrubbery. In winter, huge snow-drifts, in snowy regions, were found over this mass. These drifts gave a very good protection to both root and branch; but when the spring came, and they melted away, they developed a very tangled mass. Many of the shoots, from the weight that had been lying over them, were bowed to the earth, never to rise again by their own strength. Other shoots were half recumbent, and so they might be seen in all parts, in all shapes and conditions. Those which suffered most, in many instances *died out*, thus introducing a system, though not a very judicious one, of pruning. As a matter sure to follow where such a course was tolerated, the stalks grew more and more feeble, the leaves prematurely fell from them, while the fruit, from exhaustion of the stalk, diminished in size and flavor, and the old bushes were pronounced "used up." They now stood a very good chance of being abandoned to any fate that might follow. Sometimes, it was probably the case that new plantations were formed from the old; and then the new, in its turn, was left to work out for itself a similar destiny of ruin. The roots were left wholly uncared for. If the grass matted around them, it was thought of little consequence. It would have been thought a waste of manure to apply it to a currant bush, and a very great waste of time to have raked leaves and placed around them.

As fond as the masses are of currants, and as useful and necessary as they can be made in household economy, and as easily as they are grown and perfected, we are reluctant to believe that a course similar to the one we have described is tolerated by any one in the present age of fruit culture. Indeed, we would not suppose the thing possible, had we not, in our rambles a few days since, seen just such a mass of tangled material as the one we have above alluded to. We fear, then, that they may still be found too common every where. But why shall we speak of it, or try to point out a better way through the HORTICULTURIST? People who raise such currant bushes do not take the HORTICULTURIST. We know that fact as well without asking, as we should if they said so under oath. Not only the currant bushes, but every thing about the garden, testify that they do not take that paper, or any other one devoted to rural improvement. They *may* take a story paper or a political one, because the children like to read stories, &c. It is there that we find the difficulty of reaching such people, when we wish to tell them how this rough, tangled mass of ill-looking brush can be renovated and made very beautiful, and produce fruit so improved in size and flavor, that when they see it laid side by side with the old product, they would never believe that both came from the same garden, if they did not know the fact. Yet, we hope something will throw what we have to say before them, and they will try "just one bush," if no more, to see if we tell the truth.

The reader who has experience in horticulture will observe that we are not speaking now of setting out new plantations of the currant, or of their after management. The whole topic lies in the renovation of the old one; a plantation that perhaps somebody's grandfather or great-grandfather put out, away back towards "the

days of the Revolution." A precious relic of by-gone days, and one worthy to be preserved and made valuable.

The course of management is very simple, and can be soon told. The first requisites are a sharp knife, and an industrious hand to use it. With these, cut out all old and straggling shoots, and reduce the mass so that at most not more than four or five are left in what constituted what was called a bush at the time of planting. Let the shoots that are allowed to grow be young shoots, and straight, erect ones. Then, if any grass is matted around them, dig it up and destroy it. If weeds have sprung up there, annihilate them entirely. Spade or fork up the ground as best it can be done; and if manure is applied, it will pay good interest. But if manure is too valuable or too scarce, a coat of chip dung will do well, or what is better, gather up leaves from forest trees, and place them liberally around the roots. Many can do this, and accomplish the double object of getting them out of the way and into a place where they become available. The leaves are a good mulch, such as the currant loves, keeping the earth clean, light, and moist. They in due time become a valuable natural manure to the plant. The first season an improvement in the fruit, both in its size and flavor, will be evident; but the matter must not stop so. In each successive spring the thinning-out process must be gone through with, and the mulching with leaves, the oftener the greater success. We have seen this course pursued with ample and astonishing success; and yet it is so cheap and so simple, that any one can raise improved fruit on old bushes, or bushes springing from old roots, by adopting it.

[Mr. Bacon has very truthfully described what is still too common a sight all through our farming districts. The neglect that currant bushes and other inmates of the farmer's garden meet with is not owing altogether to want of time to care for them, but to a kind of self-admitted conviction that these things can take care of themselves. They have no conception of the difference between currant bushes well-cared for and those not cared for at all. We hope Mr. Bacon's article may meet the eye of some of them, and produce its legitimate fruits.—Ed.]

TABLE DECORATION.

BY THE EDITOR.

A late number of the *Florist and Pomologist* (iii., p. 49) contains an article on "Table Decoration," accompanied by an illustration that we like so well that we copy it. The article is written by Mr. Fleming, and is mostly of local interest; yet there are some suggestions in it that may be of interest to us. We may state that the Royal Horticultural Society, during the past two years, has offered liberal prizes for original designs for table decoration, which has had the effect of producing some which, in our estimation, are very beautiful and chaste. We should be glad to see a similar practice inaugurated here. Mr. Fleming, in the course of his article, says:

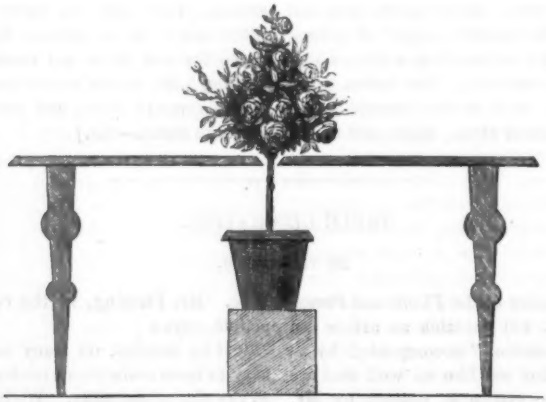
"It is, besides, on many tables necessary to have more than a center, according to the size of the table. We have always, in the *à la Russe* way, had five and sometimes seven plants and designs with flowers—that is, three centers and four small plants at the corners to balance. Now I think, as the March type is evidently exhausted, it would have been a wise regulation if the Horticultural Society had made arrangements to have a few small separate tables for the first prize, to be ornamented with five or seven, as the exhibitor might

think proper. There is also one consideration that has been overlooked in this—the tables should be the same height as an ordinary dining-table, and the judges should be seated in judging; for, although one design may look well when looked down upon from a standing point of view, its appearance is very poor when seen by the parties seated at a dining-table. The March vase is not free from this fault, although its lightness prevents any obstruction to the sight; yet the principal parts of the flowers in the top tier are not seen, particularly in the clumsy imitations now made and sold for these, and which are mostly two feet in height, with a top tier as wide as the bottom, and the eye, in looking up, catches only the bottom and top dish.

"It is not a little surprising to find how far we are behind in this, if we compare our modern forms with the old Venetian contrivances. None of the designs that have been exhibited come up to the old-fashioned but elegant tripod candelabra."

Mr. Fleming closes as follows, and introduces his illustration:

"To add to the interest of this subject, we find Mr. Kelk offering a prize of £10 for a handsome, well-grown plant. Here, again, if the tables were separate, the exhibitor could be allowed to use his own discretion; that is, say for the first prize, one table would still be sufficient for the arrangement of the single designs. There are only a very few plants adapted for table decoration, and among these at that season perhaps the Azalea is the best. Roses can only be got sufficiently perfect for this purpose with great difficulty. The most of them are besides inclined to rise, and can scarcely be trained to make suitable plants, with a good balance of bloom, sufficient for all sides. Not so with the



Azalea, and perhaps nothing tells so well in the center of a large table as a good standard."

There is a slight mistake here, for the illustration is a standard Rose, and not an Azalea, though we agree with Mr. Fleming that the Azalea is probably the best of all plants for the purpose. There are others, however, that may be used in this way very effectively, such as Roses, Scarlet Geraniums, Cinerarias, Pelargoniums, or any plant, indeed, that can be grown with a stem and a low head, for a high plant is inadmissible on a dining table.

The illustration explains itself. Our dining tables are in two or more parts, and the pot is placed under the table where the parts meet. This, of course, leaves an open space of about an inch, which is easily filled by a piece made for the pur-

pose. A friend, on looking at the figure, wanted to know how the plant was to be got through the table-cloth. The same thing may occur to others, and with it the remedy. The table-cloth must be adapted to the purpose by the fair hands of the housewife. If the cloth is in two or three pieces, the laps can come where the plants stand. Those who indulge in this luxury will easily find a means of overcoming this little inconvenience. In conclusion, may we not hope that some of our horticultural societies will offer inducements for the exhibition of table ornaments? We think it is a fit subject for the Massachusetts Society.

THE JAPANESE SILK WORM.

BY L. V. DOVILLIERS, NEWPORT, R. I.

DEAR SIR,—I send you an extract of some experiments made on the raising of the Japanese Silk Worm, Yara Mai, (mountain worm,) at the Bois de Boulogne, near Paris, France, being about the same temperature as that of Maryland.

The hatching began on the 22d of March, and ended on the 16th of April. The cocoons were made from the 1st to the 25th of June. The worms were fed with the common oak leaves, (Quercus pedunculata.)

Twelve cocoons gave, after winding, two grammes of silk, (1 gramme 15.434 grains.) They wind with as much facility as those of the mulberry tree. Their product is the same; that is, 24 or 28 pounds of cocoons yield 2 pounds of silk. The silk is not quite as brilliant, but much stronger, and a little coarser.

The raising of the Japanese Silk Worm lasts from 50 to 60 days, from their hatching to the time when they begin to spin, which lasts 8 days more. The butterfly comes out about 30 days after.

I hope that these few lines will find a place in your valuable paper, and that they may prove acceptable to your numerous readers.

[We are obliged to you for this interesting extract. It may not be known to our readers that experiments have been conducted for a couple of years past in this vicinity, but under the auspices of some French society, the subject being a worm indigenous to our western country. The worms were fed upon the leaves of *Plum* trees, about a dozen of which were inclosed in netting. The worm resembles very much, in size and appearance, that found upon the Tomato plant. In the same inclosure were a number of *Black Currant* bushes, which happened to be growing around the Plum trees. At the time we saw them, some of the worms were feeding freely on the currant bushes. We afterward learned, that the silk produced by the worms that fed on the currant was stronger than that produced by the worms that fed on the Plum, but the fiber was coarser and less lustrous. How far the experiments have proved to be satisfactory we do not know, as they have been conducted with much secrecy. In the present condition of our country, however, it may be worth while to give some attention to the subject.—ED.]

DESIGN FOR STONE STABLE AND COACH HOUSE.

BY WOODWARD AND ATWOOD, ARCHITECTS, 37 PARK ROW, N. Y.

THIS design was erected on the Hudson, during the past year, of the beautiful rock faced stone so abundant between the Spuyten Duyvil and the Highlands, and is a good example of such a building as will meet the requirements of a moderately exten-

sive establishment. It is conveniently arranged, enabling all the work to be done with the most ease, and gives thorough light and ventilation, so essential to the

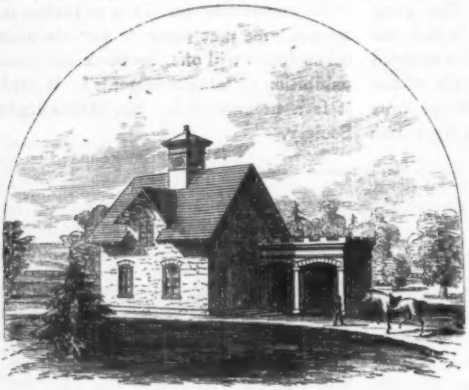


Fig. 1.—Perspective.

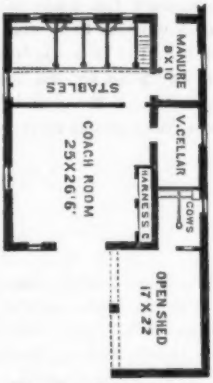


Fig. 2.—Ground Plan.

health and comfort of animals. The time has gone by to give prospective prices for any thing, but we have seen the day when this building might have been erected for about $4000. A room for coachman may easily be made on the second floor, and the plan increased or decreased to suit the wants of any one.

PLUM KNOT.

BY T. T. S., N. Y.

I LOOK with great anxiety on the rapid and wide spread of the *black knot* on the Plum. At present there are localities where this foul disease is unknown; but unless some means to stop its ravages are speedily found, the day is not far distant when this country will be deprived of one of its most valuable fruits. I think the subject is worthy of far more attention than it receives. In many sections of the country the Plum trees are hopelessly used up, while many others are quite free from it. Can not something be found to *stop*, if not to cure? Is it impossible to find out for a *certainty* what the cause is? For until we know the cause we can not apply a remedy, unless we do so by chance. Unless the question has been lately settled, it is not agreed upon by those in authority what the cause of the knot is.

Being interested in the subject, I have paid it considerable study and attention; and for myself, I can come to but one conclusion, and that is, that the knot is caused by the sting of the Curculio. This fact I think I *know*, that seasons following those that have produced an abundance of fruit free from the sting of the Curculio, have always been noted for a large increase of the knot on the trees. In proof of this, I will cite one instance that has come under my notice. The spring of 1862 was late, or, rather, it was late before the earth got well warmed up, for we had a good deal of cold rain.

That season we had an abundant crop of Plums, Apricots, and Nectarines, and *entirely* free from the sting of the Curculio, a thing quite unusual with us.

The following summer, (1863,) the ravages of the black knot were greater by a hundred-fold than they had ever been before. In my own and other nurseries I had a fine chance to make observations.

Trees that were yearlings, (in the summer of 1862,) and then entirely free, were, at two years old last fall, more terribly invested with the knot than any I had ever seen before. This was true not only in my own, but in other nurseries. Trees that were coming three years old last fall, were not so badly affected; four years old still less; yearlings not at all. Some varieties more than others. Lombard was by far the worst, more than two-thirds of the trees being spoiled, and Columbia next, Monroe being about the freest. German Prune was also quite free. Not only were trees in the nursery rows examples, but garden trees. Never have so many knots been seen as during the past summer.

Now the theory I draw from all this is, that the spring of 1862 was particularly unfavorable to the early exit from the earth of the Curculio; that they did not make their appearance until after the fruit became too far advanced to sting; and that, finding itself unable to deposit its eggs in the usual manner, but still impelled by an irresistible instinct to perform the functions of its nature—to continue its kind—it seeks a substitute, and finds it in the young growing shoot of the Plum tree, seeking those kinds that grow the quickest, and therefore the softest wood, as Lombard, &c., and seeking young trees because of their greater softness, in preference to older ones, but still stinging them also to some degree. This is an accurate statement of facts as they have existed under my observation; and while they may not *prove* any thing, they may help *lead* to prove, on the part of some one else, which is the impelling desire that has caused this statement.

I last summer tried the experiment of putting spirits of turpentine on the wound made by cutting out the black knot, and it *seemed* to prevent its reappearance, and to help heal the wound. Shall try it again to be sure.

As I fear I have already exceeded bounds, I will only say that I hope the question relating to the black knot may receive more attention than it has, and that we may soon free ourselves from the dominion of the Little Turk.

[It has not yet been settled whether the black knot is caused by an insect, or whether it is a disease of the sap. Some believe that it is caused by an insect, and that insect the Curculio. The advocates of the insect theory point to the Locust, Gall-fly, and similar insects, for confirmation; while the advocates of the sap theory affirm that the Curculio is incapable of producing any such results, and will tell you that the skin of the fruit is always more tender than the bark of the tree. It is a question, however, which any intelligentlman of leisure can settle in one year's time, and it is a great pity that a few such men will not devote themselves to the task. The question is one of great importance, affecting, as it does, the successful growth of one of our most valuable fruits. If the knot is caused by the Curculio, and not some other insect, then jarring the trees is the best remedy that can be applied with our present knowledge; but the knot should always be cut out on its first appearance. We shall be glad to hear from others on this subject.—Ed.]

DOYEN DILLEN PEAR.

BY THE EDITOR.

This pear is not yet much known, though it can not be called a new one. The tree is a vigorous grower, and productive, and it may prove to have some merit as a market fruit, though it comes in at a time when good pears are abundant. It is a fruit, however, that the amateur may safely add to his collection.

Fruit, medium, pyriform, with a stout neck. *Skin*, yellow, thickly covered with russet dots. *Calyx*, small, open, in a small, moderately shallow, and slightly

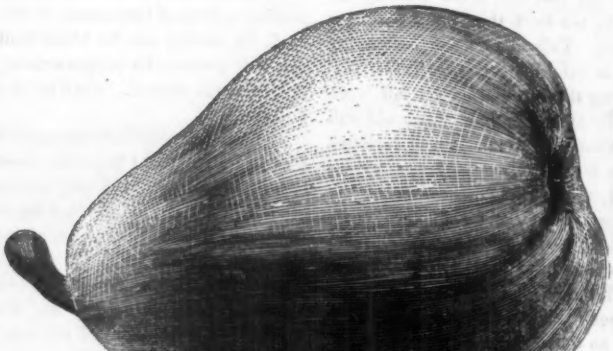


Fig. 1.—Doyen Dillen.

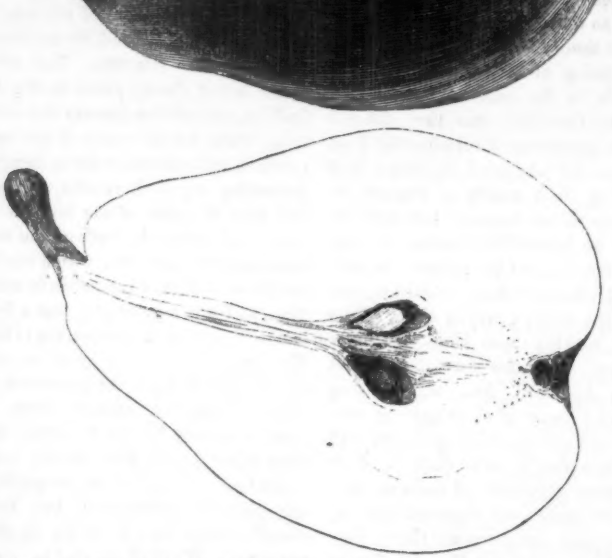


Fig. 2.—Section.

wrinkled basin, surrounded with russet; segments short. *Stalk*, short, stout, obliquely set, with a depression on one side. *Flesh*, melting, juicy, pleasantly sub-acid, slightly vinous. Quality, very good. It is in season in October and November.

WAYSIDE THOUGHTS UPON ARCHITECTURE.— VI.

BY ARTIFICER.

Design.— The prevailing, uppermost thought of architectural design is, that it is wholly speculative; that its fruits grow from chance; a fancy, it may be,

fickle or fixed, without any particular adaptation of means to the end in view, or, as modernly expressed, "mere matter of taste."

Now that design is not this, but has a far higher, nobler meaning, as being analogous with nature herself, and regulated, in every department of it, by principles full of force and beauty, I shall attempt to show, as well as I can, in the course of a brief chapter or two.

We all know, doubtless, that design, in a literal sense, would embrace a vast field, not only of industrial and artistic pursuit, but provide, in one comprehensive and justly balanced range, for the sixpenny plaster cast and the nobly sculptured and painted art. Design in architecture, however, is not so general in its application, since it is represented by distinct characteristics, defining, in a measure, its extent and power, and these involve, as chief elements of design, first, Fitness; second, Proportion; third, Beauty. From the discovery of these, with their natural accessory qualities, we infer design, and design is perfect in proportion as their requirements are obeyed.

Aside from the charm which nature lends, Architecture is dependant for its substantive sources of power and pleasure, upon simple matter or some of its qualities. This matter comes to us in a variety of unworked forms, denominated by common acceptation, Materials, as earth, wood, and stone, and in some of its qualities by chemical action or comparative worth. But matter is in itself incapable of producing emotions or exciting affection in the human mind; but the moment we begin to associate the qualities of matter with other qualities, or to represent the signs of skill, utility, or convenience, and so discover the relation between the symbol and the thing symbolized, we have those elements productive of emotions, &c., and also most naturally productive of the expressions of dignity, sublimity, or beauty, and, therefore, we have fitness. Fitness, then, is the thought or intention which adapts means to the end, and is chiefest of the elements of design.

Next to matter is the subject of form, as determined by fitness. I have stated, in a former chapter, that form in architecture is the sign or signs of skill, utility, convenience, &c., but neglected to say, farther, what has special bearing upon our subject now, that form is of four kinds or classes. First, natural or imitative; Second, simple or independent; Third, compound or dependent; and, Fourth, conventional.

Natural forms represent leaves, flowers, birds, animals, and man, and are most beautiful in which fidelity of representation is preserved.

Simple forms are those in which the character may be transferred or disposed at the architect's pleasure, so as to cause a form to assume lightness or weight, gloom or gladness, beauty or sublimity.

Compound forms, on the contrary, are designed for particular scenes or situations, which determine and fix their characters, and are most fitting where there is strict obedience to the general character.

Conventional forms are those established by the concurrent usages of a society or societies within the jurisdiction of a commonwealth or nation.

Although in forms distinguished by the elements of fitness we discover an end suggesting intuition, and, therefore, design, no perfect design is yet attained, since other natural accessory qualities expressive of it remain to be used and considered, including the other elements of proportion and beauty.

Uniformity and variety, when connected with design, are beautiful. Uniformity being also expressive of design, and variety of embellished design, it is evident they will be perfect in proportion as they express unity or congruity of form, proportion, and embellishment, or ornament.

To illustrate, suppose a wall is built and supported with columns and pillars square, polygonal, and round, separately and differently ornamented, the propor-

tions being unlike each other. It is evident, here, we should have variety, but not uniformity, and very little beauty. Now take the proportions, and reduce them all to the same unit of measure for the height; let the style of ornament be the same on all, and the forms of capital and column, if they can not be all alike, let them be equally disposed or placed in balance, as many forms on one side of the center of the subject as on the other, and so be productive of unity of design.

In buildings of any kind, for the above reason, it is wrong to destroy their beauty or uniformity by lavishing all the wealth of design, and a large share of the purse, upon the façade or front, leaving side and rear wall naked and rough, or to place embellishment upon a front, and deny it to other and similar parts of the building. Therefore I conclude that when uniformity and variety are proportionate, or duly proportioned to each other, the beauty of their forms will be in proportion to their embellishments and unity respectively.

THE FOREIGN GRAPE IN OPAQUE HOUSES.

BY JAMES WEED, MUSCATINE, IOWA.

It has long been understood that exotic grapes can not be successfully grown in the climate of the United States, except under glass; and it may be regarded as useless to attempt their production by any other means than the employment of glazed structures.

In the early attempts to introduce their culture in this country, the causes of failure in the open air were not well understood, and it was confidently believed that protection against the severity of our winters, by laying down and covering, would insure success; but experience and observation soon recognized the effects of mildew. Whatever views may be entertained of the recent origin or development of the parasitic fungus, it is now known to be the principal drawback in their culture.

Assuming that climatic changes, occurring suddenly, and embracing great extremes, affecting the vital functions of the vine, are at least the *proximate cause* of mildew, why may not this malady be obviated by means of artificial irrigation, combined with the use of shutters in the form of movable roofs? The vines being planted in rows suited to the purpose, and the shutters composing the roofs being of substantial character, may be closed over them for protection in winter, in cold nights in spring, and on any occasion in summer when more rain is falling than may be conducive to a perfectly healthy vine growth; and the excess of water conducted into small cisterns placed at short intervals along the ranges, from which the vines may easily have a daily sprinkling, or a substantial watering, whenever protracted dry weather may render it desirable. Is the confined atmosphere and an increased temperature over that of the open air in our bright climate, which may be attained by the use of glass, essentially necessary to prevent mildew or ripen the fruit?

If not, then the luxury of Muscats and Hamburghs may yet be enjoyed by many an industrious and enterprising ruralist who can not afford glass houses.

[It may be accepted as a fact, that the foreign vine will not thrive in the open air here, not because the vines will not stand our winters, but because they soon become so affected by mildew as to impair their vitality, and render the ripening of a crop an impossibility. No fact in grape culture has been more thoroughly tested than this. There can be as little doubt, we suppose, that mildew is primarily owing to sudden

and extreme atmospheric changes. The protection of a glass house, consequently, has become a necessity for the successful growth of the foreign grape. The questions of Mr. Weed, therefore, assume considerable importance. Our own opinion is, that protection, such as Mr. Weed proposes, might be found, under some circumstances, to answer a good purpose. We should be glad to hear the opinion of our readers.—Ed.]

NEW OR RARE PLANTS, &c.

We glean the following from foreign publications. We hear of nothing new among home productions, except a fine Geranium and a collection of Phloxes raised by the Messrs. Cranstoun, but not yet named. We shall announce a new Strawberry in our next.

Helichrysum Mannii, (Mr. Mann's Helichrysum.)—*Nat. ord.*, Compositæ. *Linn.*, Syngenesia superflua. Who does not even in his nursery days remember the "Yellow Everlasting" on the mantel-shelf? and Sir W. Hooker says that "the present noble species, if it can be retained in our gardens and increased, may revive the taste for the genus." It is a native of Fernando Po, and the Cameroon Mountains, at heights from 4,000 to 13,000 feet above the sea's level. The numerous globose flowers, each an inch in diameter, are in a large corymb; the involucre or "everlasting" part is white tinged with green. —(*Bot. Mag.*, *t.* 5431.)

Quamoclit Nationis, (Mr. Nation's Quamoclit.)—*Nat. ord.*, Convolvulaceæ. *Linn.*, Pentandria Monogynia. A tuberous-rooted perennial. A native of the Peruvian Cordillera. Flowers scarlet, stems run the whole length of the rafters of a greenhouse. "It may possibly bear our summers in the open air."—(*Ibid.*, *t.* 5432.)

Saccolabium Harrisonianum, (Mr. Harrison's Saccolabium.)—*Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria. Native of Pulo Penang, in the Chinese seas; imported by Messrs. Stuart & Low, of the Clapton Nursery. Flowers white.—(*Ibid.*, *t.* 5433.)

Begonia Mannii, (Mr. Mann's Begonia.) *Nat. ord.*, Begoniaceæ. *Linn.*, Monœcia Polyandria. One of the Begonias with wingless flowers. Native of Fernando Po, at an elevation of about 1300 feet. Flowers rose-colored.—(*Ibid.*, *t.* 5434.)

Ada aurantiaca, (Deep-oranged-flowered Ada.)—*Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monogynia. Native of New Granada, at an elevation of 8500 feet. Flowered in January.—(*Ibid.*, *t.* 5435.)

Barkeria Skinneri superba, a cool-house Orchid.—(*Floral Mag.*, *pl.* 185.)

Pompon Chrysanthemums—*Firefly*, Anemone-flowered, bright orange scarlet. *Viola*, very double, violet lilac. *Lizzie Holmes*, very double, canary-colored. All raised by Mr. Salter.—(*Ibid.*, *pl.* 186.)

Coccosypsilon discolor.—*Nat. ord.*, Rubiaceæ. *Linn.*, Tetrandria Monogynia. Introduced as long since as 1793, but now re-introduced to notice as a very effective plant for hanging baskets. It is so employed at Farnham Castle and Dangstein. It is a native of the temperate mountains of St. Domingo and Jamaica. Its blue, berry-like flowers are in clusters on its creeping stems. We recommend it as a basket plant, and quote the following from the "*Floral Magazine:*" "We have been supplied, through the kindness of the Bishop of Winchester, with the following directions as to its cultivation, by Mr. Lawrence, his lordship's intelligent gardener: 'It is,' writes Mr. Lawrence, 'as most of our beautiful things are, very easily cultivated. I find from experience that during the summer months it will do better in a close green-house, near the glass, and fully exposed to the light and sun's rays, than in a stove, as might be supposed from its being a native of the

West Indies; but on the approach of autumn it requires more heat, both to bring its flowers and its beautiful ultramarine berries to perfection, the latter lasting in their brilliancy during the whole winter. It will thrive during the winter in any house where heat is used, such as a cucumber or pine-pit, or intermediate house. The propagation, also, is very easy, as it grows equally freely by seeds or cuttings. When planting it in the basket, I first line it with moss, then fill it up with an ordinary compost of loam, leaf mould, and sand; when the plant begins to grow freely, I peg the shoots over the surface until it is thoroughly covered; then it will throw enough shoots over the edges to make a fine mass, otherwise it will look straggling and poor.'"—(*Ibid.*, *pl.* 187.)

HYBRID PINKS.—*Striatiflorus*, crimson flakes on rosy crimson ground. *Marie Paré*, white. *Rosette*, salmon pink.—(*Ibid.*, *pl.* 188.)

CHRYSANTHEMUMS.—*Prince Alfred*, pearly white tinged at the base with peach blossom. *Princess of Wales*, rosy purple. Both first-class flowers, brought out by Mr. Salter.—(*Florist and Pomologist*, ii., *p.* 49.)

MONTHLY CALENDAR.—JUNE.

Orchard, Fruit Garden, &c.—This is a good time to thin out fruit where it is too thickly set, especially pears. Destroy caterpillar nests in the morning or at night, when they are "at home." Fresh cut grass or clean litter may be placed around Strawberry plants, to keep the fruit clean. Cut off runners, except where they are wanted for new beds. Hoe off all suckers of Raspberries and Blackberries, except those immediately around the stool, and of these retain only three or four of the strongest. Pinch out the tops of the new canes when four or five feet high, according to the kinds. Spread out the fruiting canes, to facilitate the ripening and gathering of the fruit. Tie up Grape vines as they grow, and keep a sharp look out for the Rose Bug and Steel-blue Beetle. The last appears first, and eats up the buds as they swell. The treatment for both is the same: knock them into a basin of water, and then kill them. This is better than any kind of washes. Thin out the bunches of fruit when too thick, especially on young vines. Pinch in the laterals to a single leaf, and do it before they get large. Summer pruning or pinching may now be practiced on all fruit trees.

The Grapery.—The first crop in the *Hot Grapery* will now be mostly cut; in some, altogether so, and water must be gradually withheld to favor the ripening of the wood. The fruit will gain in sweetness by long hanging, but sometimes loses in flavor by being left on too long. More air may be admitted as the fruit ripens. In the *Cold Grapery* thinning out will need attention. Novices generally do not thin out enough. The size of the berries left is increased in proportion to the number removed, as a rule. Attend to pinching in laterals, and ventilate as before directed, avoiding cold currents of air. The chief care now is to prevent all sudden changes of temperature.

Green House.—There will be little to do here, most of the plants being now out of doors, where they must be carefully looked after. If Fuchsias, Caladiums, &c., are kept inside, the house should be lightly shaded.

Plants in Rooms.—The plants should now be all out of doors, as directed last month.

Ornamental Grounds.—Lawns should be frequently cut and rolled. Any bedding plants, Dahlias, &c., left over, should now be put in. The sowing of flower seeds should also be finished. The principal work will now consist in weeding, and keeping every thing neat and clean. Plants that need it should be tied to stakes, which should be concealed as much as possible by the foliage of the plants. Edgings of

Box or grass should be neatly trimmed, and new walks and roads should be frequently rolled, especially after rains.

Vegetable Garden.—Seeds of Snap Beans, Sweet Corn, Radishes, Lettuce, &c., should be sown at short intervals for a succession. Melons, Cucumbers, &c., should be put in without further delay. Keep the weeds down, and the soil mellow. It may as well be understood that we discountenance the practice of drawing earth up to Peas, Beans, Corn, Potatoes, &c., and those who follow our advice will forego this practice. The thoughtful gardener will study how he may best keep up a succession of crops, and look about here and there for a vacancy to put in a few seeds, so that the ground may not be idle at any time.

EDITOR'S TABLE.

To Contributors and Others.—Communications, Letters, Catalogues, Periodicals, Remittances, Packages by Express, Advertisements, &c., should be directod to Mead & Woodward, Editors and Proprietors, 37 Park Row, New York. Exchanges should be addressed to "The Horticulturist."

Plants, etc., received.—To Mr. Huntsman we are indebted for a Seedling Raspberry, and to Mr. Brill for the Lindsley Raspberry, the latter very dry after some circumambulation. We shall take good care of both these. To Mr. Clark we are also indebted for a few more plants of the Clark Raspberry, which proves to be hardy and good. These and some others we shall report on after a season's trial. To Messrs. McElwain & Brothers we are indebted for some choice flower seeds, and also to Messrs. Thorburn & Co., and A. Bridgeman. These gentlemen will please accept our thanks.

American Pomological Society.—We learn from President Wilder, that the tenth session of the American Pomological Society will open at Rochester on the thirteenth of September next. Held in the midst of a noted fruit-growing district, we may fairly anticipate a display of unusual interest. The numerous friends of Mr. Wilder will be glad to learn that his health is improving. We hope that, in the goodness of Providence, he may be fully restored before the session opens, that we may enjoy the benefits of his wisdom and large experience.

"Ten Acres Enough."—This is the title of a work just published by James Miller, New York, which we have read with much interest. The author's business in the city being much broken up by the embarrassments which preceded the crisis of '57, he determined to gratify a long-cherished desire for rural life, and accordingly purchased ten acres between Philadelphia and New York. The present volume gives the results of his experience, and presents the proofs that ten acres, judiciously managed, are enough to afford a good living to a man who is ambitious rather to make his family comfortable than to lord it over many acres. His mistakes are as apparent as the wise application of means which gave him permanent success. The work is well written, and may be read profitably by all, but especially by those who propose to turn their attention to gardening for the first time. It will help them to determine whether they will act wisely in so doing. The au-

thor, without mentioning names, acknowledges his indebtedness to the labors of other writers; and he has thus no doubt added much to the interest and value of his own. The close of the volume would seem to invite criticism, owing to the prominence given to a certain land enterprise, which, it strikes us, is not in good taste in a work of this kind, though it may all be right. The work itself, however, is well calculated to be useful.

MERAMAC (MO.) HORTICULTURAL SOCIETY.—We are indebted to Secretary Muir for a list of the officers for 1864, as follows: *President*, Dr. J. B. H. Beale, Eureka P. O. *Vice-Presidents*, Wm. Harris, Allenton P. O., L. D. Votaw, Eureka P. O. *Recording Secretary* and *Treasurer*, Wm. Muir, Fox Creek P. O. *Corresponding Secretary* and *Librarian*, T. R. Allen, Allentown P. O. All of St. Louis Co., Mo.

MODEL REPORTS.—A correspondent in New Jersey writes as follows in regard to "Model Reports." His suggestions are eminently to the point. He says:

"While writing, permit me to remark that I have read with interest the 'model' reports on the new grapes, &c., but, with all due consideration, would say that those of but one writer appear to me to deserve that epithet. I allude to those of F. C. Brehm, of Waterloo, N. Y. I have found the others of small value compared with Brehm's. Let me ask you to recommend to your correspondents to give *day* and *date* of *leafing*, *flowering*, *coloring*, *ripening*, &c., *elevation* of location above the sea, *place* of residence or of *vineyard*, *exposure*, *soil*, *protection*, *drainage*, *geological position* or *composition of superficial* covering, and especially, in every instance, to give the *locality* and *name* of the *writer*, with his *Post-office address*.

"Of what use are 'model' reports if we do not know whether the writer resides in Massachusetts, Western New York, on Lake Erie, in Illinois or Missouri?

"Ask 'Pratiquer' to notice each of the above particulars in his next report. So good an observer should give us something reliable. He tells us he is cultivating grapes in the mountains of the Hudson, latitude 41 deg. 30 min. Where? How high above the sea? The periods of flowering and ripening in connection with locality, &c., if properly studied, may lead to some useful result; but notes of ripening standing alone are like the words in a dictionary, very useful if properly associated; disjoined, useless.

REMARKS OF MR. BARROW.—The following are the remarks made by Mr. Barrow before the Horticultural Association of the American Institute. They are brief and to the point, and will interest all engaged in similar enterprises:

I will detain you only a few moments with some remarks on a dry subject; one, however, which has a direct interest for a Horticultural Association, as it is based upon that which is now, unhappily for us all, a purely vegetable production, limited in extent only by the quantity of fibers fit for the manufacture of paper, now known and yet to be discovered. The subject is Finance, its basis Mr. Chase's pets, Greenbacks.

We are engaged in establishing a society, the objects of which we all appreciate; the success of which will be useful to the science of which we are all votaries, and creditable to our city, our State, and ourselves. It ought to succeed. We have all the advantages we could desire. If we fail, our failure will be a disgrace to us; and we must therefore place failure beyond the bounds of possibility. To ensure success, however, something more is wanting besides enthusiasm for the science and a love of the beautiful.

We desire to found a lasting institution, one which shall outlive ourselves, and prove a benefit to future generations. We should aim at nothing less than the collection of the best Botanical Library on the continent, the ownership of a model Gar-

den and Glass houses, and the establishment of a Society whose approval shall be a stamp of sterling merit. How is this to be done? Not by outbursts of spasmodic enthusiasm, but by quiet, continued, prolonged, increasing efforts; by taking such measures as shall ensure us a permanent and increasing *income*. We must not rely upon the generosity of individuals, but upon a widespread basis of small subscriptions. We must increase our numbers to such an extent that the falling away of a few will be more than compensated by the accession of others. We must render ourselves independent, and we shall then merit the public support. All this will require much time, but it can certainly be effected. Look to what has been done at Boston, and then say whether *we* ought to fail. I have not the figures before me, but I believe that I understate the case when I say that the Massachusetts Horticultural Society is possessed of real and other property worth not less than $100,000. Part of this is certainly the result of liberal donations and bequests, and of judicious investments; but the donations and bequests came after the Society had shown itself worthy of liberality. "Heaven helps those who help themselves."

Let independence and self-support be the watchword of this Association. We shall have scientific and practical men among us well worthy to vie with those of all other cities and countries. They will support the credit of the Association in the fields of scientific Botany and practical Horticulture. Let those among us who have not the same qualifications remember that there is work for us to do, less distinguished, but not less practically useful. It is for us to set the machine going, and to keep it steadily at work by supplying it with the necessary motive power in the shape of subscriptions. Each one of us can bring in at least one more member. Let him do so, and our numbers will soon increase in a geometrical ratio. Those who take an interest in horticultural pursuits are much more numerous than we may think at first. Every one who occupies a respectable room may grow a flowering plant in it, and we all must know, from our own experience, that the possession of a single plant gives us the desire to collect more, and to procure all the information we can about their culture.

Finally, as a commencement of the good work, I beg leave to hand to the Secretary the names of some candidates for membership; and I trust that each one of us will consider himself a Special Committee of one on recruiting service.

Death of Col. Wilson.—The death of this brave young man, who fell in the battle of the Wilderness, calls for a few remarks. He was a son of the well-known horticulturist, the late James Wilson, of Albany. His father died when he was only 15 years old; but even at that early age he managed the extensive nursery business with great ability; and when he left it, to turn the pruning hook into the sword, and battle for his country, the business was highly remunerative. At the beginning of the war, young Wilson took command of a company of the New York 43d Volunteers, but soon became Major. He was promoted for ability and good conduct, and when he fell in the battle of the Wilderness, he was acting Colonel of his regiment. Mr. Wilson was a young man of fine personal appearance and decided gallantry, and was greatly beloved by his comrades. He fell at the early age of twenty-five. Had he lived to follow his profession of horticulturist, there can be no doubt that he would have attained to a distinguished position.

HORTICULTURAL ASSOCIATION OF THE AMERICAN INSTITUTE.

The second meeting of this Association was held at the rooms of the Institute on Wednesday evening, May 4, 1864, at 8 o'clock.

Mr. Peter B. Mead called the meeting to order, and, after a few remarks, introduced the newly elected President, Mr. B. C. Townsend, who, on taking the chair, said:

Ladies and Gentlemen,—I rise with feelings

of great embarrassment to thank you for the honor which you have seen fit to confer upon me; an honor the more highly appreciated, as it was unsolicited and unexpected. At the time of your last meeting I was out of the city, and knew nothing of your action until my return. I feel embarrassed from the consciousness of my inability to worthily fill the position to which you have elected me. You will therefore permit me to occupy it only temporarily, until another more capable of discharging its duties can be found. At the same time, allow me to say that I take a great interest in the art of horticulture, and feel mortified, as a citizen of this city, in being so long without a society like this. With the influences and advantages around us, of our Central Park, and many other public and private parks and gardens, it is not very creditable to us to be without a well-organized Horticultural Society. The salutary effect on the occupants, of embellishing the surroundings of houses, is well known, and surely those who do not cultivate a taste for this art, lose much enjoyment. It should, therefore, be our aim to awaken an interest in this matter. See the innumerable gifts of God that crowd our pathway, which he has made common to us all. Our endeavors should be to foster a love for the simple pleasures of the garden; and, as far as I am concerned, my aid shall be cheerfully given. I will not take up any more of your valuable time from the discussion of the subject for the evening, but merely tender to you again the expression of esteem and ardent good wishes.

Mr. John W. Chambers, the Recording Secretary, read the minutes of the last meeting, which were adopted.

Mr. Mead reported from the Committee appointed to prepare By-Laws for the Society, that they had not fully accomplished their labors, and on motion further time was granted to them.

Mr. Mead suggested holding a horticultural exhibition in the month of June, when a fine display of flowers, and some of the early fruits, could be had. This matter was favorably received, and, after a brief discussion, the subject was postponed for action to the next meeting.

The subject for the evening, "FLOWERS," was then taken up, when Mr. John Henderson read the following Essay:

Subject, *Flowers*. Why I proposed it. Because the culture of flowers is the highest attainment of horticulture; consequently they ought and do take precedence in all Horticultural Societies. For this reason, I considered it the most fitting subject for its first discussion; but in proposing it, I did not expect to be called upon to speak of it myself, for I am well aware there are not only among my own profession, but also among amateur florists, many more capable of doing so, more especially at this season of the year, when, so distracted with business, I have no time to think the subject over, although dwelling, as it were, among flowers. But it is a subject so intimately connected with our future existence as a society, and of so great a scope, that I trust it will afford us very many more discussions, when others more able will favor us with their views.

Flowers have been more or less connected with man from the very earliest period. Indeed, the opening chapters of the Bible inform us that when God had created man, he planted a garden in Eden, and caused to grow every tree that is pleasant to the sight and good for food, and therein he placed Adam, our first parent, thus typifing what is necessary for man's most perfect happiness. Nor has this changed in our day. Although man has so degenerated, yet, when he emerges from his sunken state, and strives to regain his original lofty nature, he does it in the garden; for here he finds in the cultivation of flowers, that true happiness which the highest honors of the world can not give him.

Let us take man in his most degenerate condition, and we shall find that, when he arrives at the highest point of civilization, it centers, as in our first parents, in a garden. For instance, the savage, when emerging from his wild state, commences with agriculture; that is, growing corn and cereals, and getting together herds of animals. Then, in order to facilitate the more easy culture of the earth, he fashions rude instruments of husbandry, thus bringing the mechanical arts into use. This very soon leads him to barter and exchange, when commerce begins, and commerce we all know by its wealth; when ambition shows itself in building splendid mansions, and adorning them with the most costly paintings, and beautiful pieces of sculpture, art and science can bestow.

When these are all obtained, horticulture

asserts its sway. He surrounds his mansion with magnificent groves of trees; he plants an orchard, and makes a vegetable garden; but yet it is not perfect. He still feels a want, and that want is only supplied by flowers. He adds these to his otherwise beautiful dwelling, and his Eden is perfect.

As I before observed, Flowers have been more or less associated with man in all ages. The ancients paid great attention to their culture. Flower markets existed in ancient Athens. India, China, and Mexico have been famous for the cultivation of flowers from the earliest periods to which their history can be accurately traced. They were in great request by the ancients at all their entertainments. They scattered them before the triumphal cars of returning conquerors. They adorned the brows of their gods with wreaths of flowers. They constituted the mystical language of poetry, and in our day, they are the testimonials of our gratitude. They add brilliancy and luster to our festivals. We present them to those whom we love. We place them on the coffins and graves of our departed friends. We use them in decorating our churches on all joyful and religious occasions. But, above all, we use them to adorn our homes; and who has not felt their softening influence on his spirits? What pleasure they afford us when placed in our dwelling rooms, and how grateful and pleasant their odor. And who is there when going to a strange house, and perhaps not knowing any of its inmates, when ushered into the parlor, has not felt a load, as it were, taken from off his shoulder, as his eyes glance on a little vase of flowers? for his heart tells him that here a genial spirit dwells. We read that the celebrated Lord Bacon, while composing his sublime philosophy, used to have a vase of fresh flowers placed on his table every day. And what is their so lovely, after the cold blasts of winter, as the flowers springing from their earthy beds. With what delight do we not welcome the Primrose and modest Violet, gently telling us of the more gorgeous flowers that are following in their steps as summer advances. But there is a pleasure attached to the culture of flowers that never tires. They soothe our mind, and cause us to forget the cares and toils of life. Many of the most celebrated men the world has ever produced, have ended their days in the quiet and happy pursuit of horticulture. And this is easily accounted for, as flowers are ever changing, and showing us new beauties. We sow the seed, and after a few days or weeks are gratified in seeing the young plants springing from the ground, and then observing them from day to day increase and develop their growth until they arrive at perfection in blossom. Indeed, they are as it were our second children. They require constant care and attention, and that care and attention are so pleasing to us that we never tire of it.

Look at that masterpiece of painting or of sculpture. It is beautiful; it is every thing desirable as a painting or as a piece of sculpture; but it is the same to-day as yesterday, and will be years hence. But not so with flowers. They each have their season of flowering, and each year, as the returning season advances, we look forward to it with as much delight to see a particular flower as though we had never seen it before.

But let us turn for a moment to the commercial value of flowers. Few are aware how important a part the products of flowers assume in our every-day life. Whence come all the delicious perfumes of the toilet table? What would be the manufacture of pomades and soaps without the extracts from the fragrant flowers to destroy the rancid and disagreeable odors inseparable from all articles made from fatty substances? In Italy and France, in Asia and Africa, and more recently in America, thousands of acres are wholly used for the culture of flowers for their perfume. But at present France and Italy take the precedence over all other nations in this particular branch of manufacture; and in order to give you some idea of the extent to which this art is carried, I will give you the amount of flowers that one manufacturer of perfumes at Grasse, in the south of France, annually makes use of. This house alone consumes over 80,000 pounds weight of orange blossoms, 60,000 pounds of Cassia, 60,000 of Rose-flowers, 30,000 pounds of Jasmine flowers, 40,000 pounds of Violets, 30,000 pounds of Tuberose flowers, besides thousands of pounds of Lilac, Mint, Thyme, Rosemary, and other fragrant plants. In giving this estimate, you must understand it is for the flowers free from stalk, leaves, or wood; and this is the consumption of only one out of the hundreds of manufactures in France and Italy.

Have you ever been in a city noted for any

particular branch of manufacture? If so, you will have observed that every other house appears to be a factory. Chimneys are sending up their volumes of smoke. The rattling and hum of machinery surround you on every side. If you go to Grasse, in the south of France, there every one appears to be employed in the manufacture, or, rather, the art of extracting the odors from flowers. The whole town smells of flowers! Walk in the country, and almost every wagon you meet, or every peasant girl or boy, is carrying baskets of flowers to the different laboratories in the town. Indeed, the whole air is so impregnated with their fragrance, that for miles before you come to their vicinity you can smell their delicious fragrance, as it is wafted along by the breeze. But it is not my intention of here giving in detail a full statistical account of the quantities and value of flowers used for this purpose, but only to observe that the remarks I have just made are from personal knowledge, from having resided for many years in the immediate vicinity of Grasse and Nice. But this is a branch of commerce only just opening up in America; and who can foretell to what an extent it will not some day arrive at, for America possesses every degree of climate necessary for the production of flowers, the same as Italy and France. Already there are hundreds of acres under the cultivation of Lavender, Peppermint, and Wintergreen, which are extensively exported to Europe.

But I will not detain you longer on this subject, for it is of so much importance as a branch of commerce to this country, that I feel the growth of flowers in America for the manufacture of perfumes, to be a fitting subject for another discussion. I will therefore turn to the cultivation of flowers for the decoration of our dwellings, either as plants or as cut flowers. Perhaps there is no city in the world where cut flowers are so extensively used as in New York. I say this from a personal knowledge of the consumption of London and Paris, the former a city with more than double the population of New York; yet I think I am correct when I say the consumption of cut flowers for bouquets is nearly double in New York to what it is in London. And in order that you may judge somewhat of that consumption, I will give you the quantity of flowers I have myself cut for that purpose during the past season, say since September last. Of that beautiful Carnation called La Purité, of which there is a specimen on the table, I have cut 50,000 blossoms; of Bouvardia, 30,000; of the double Chinese Primrose, 70,000; of Tuberoses, 30,000; besides about 50,000 of other flowers, such as Roses, Camellias, Heliotropes, &c.; and yet I am only one of the many engaged in the cultivation of flowers for the bouquet makers of New York.

I may here observe, that although New York takes the precedence over the cities of the old world in the matter of cut flowers, it is not so in regard to plants in pots; for there the consumption is far greater than here. In the vicinity of London, almost every house has its garden belonging to it, and almost always filled with flowers. Flowering plants are also much more extensively used for the decoration of rooms, and especially for windows; a system I hope to see more extensively adopted in New York; for window gardening adds a charm even to the abode of the wealthy, and also the poor have the delight of tending a few choice plants, and of becoming acquainted with their habits and flowers. Horticultural Societies have also done much for the encouragement of the cultivation of flowers, and particularly among the humbler classes, with an evident increase of amenity within and around the dwellings, as well as an unquestionable tendency to refinement of habits and feelings. In almost all European cities there were floral markets specially devoted to the sale of plants and cut flowers. Who has not heard of the Marchée aux fleurs, or flower markets of Paris, or of Covent Garden in London? These markets have become world renowned, solely from their being the great depots for flowers, whether grown in pots or cut for bouquets and for the table.

But let us turn for an instant to artificial flowers. It may be said, what have they to do with the present subject? I answer, very much. We are so constituted that we will have flowers at all times and seasons if possible; for what greater adornment for the person? How would a lady's hat or bonnet look without them? but as we know natural flowers would fade too soon for this purpose, art has imitated nature, and there is not a new flower, or a new shade of color introduced by the florist, but the artist in flowers is ready to imitate it; and to give you some idea of the extent to which they are used, I have only to

mention that France annually exports over $200,000, over and above what is consumed in the country itself. Then, again, the colors of flowers. What more varied or beautifully brilliant? Art has never attained to them, but must ever be an imitator. The painter attempts to portray their brilliancy on the canvass; but how feeble the attempt. Let any one take the most beautiful painting of flowers by a Van Huysen, or a Cuyp, and let him compare the flower on the canvass with the natural one, and he will at once perceive how great a difference there is. Indeed, in many instances we have no means of describing a color except by naming the plant. For instance, the Rose, Lilac, Peach, Lavender, Violet, and many others. The manufacturer of silks for dresses or for ribbons, studies the colors of flowers, in order to imitate them as near as possible in his manufactures, so that no lady can adorn herself in the most costly dress or the most lovely ribbon, but its coloring is derived or imitated from the humble and lovely flowers.

In the year 1636 a flower mania prevailed in Holland, chiefly in reference to the Tulip, in which people speculated as in stocks and railway shares in our day. At that time a single Tulip called the Semper Augustus, sold for 13,000 florins, about, I believe, $6,000 of our money, the ownership of a Tulip being often divided into shares.

Artificial means have been employed for the produce and rearing of flowers far more generally than for the cultivation of fruits and vegetables. Those who can only afford a small green-house, almost always devote it to flowers; and those who can not attain this have often favored plants under a frame or in a window of a room. I need scarcely mention what the amateur and florist have done for flowers, in the production of new ones, or the improvement given to the form and shape of old varieties. We have before us some beautiful new Verbenas, raised by Mr. Peter Henderson, who has become somewhat identified with this flower. There are also some pretty Pansies raised by myself; also a Heliotrope, which I call the Belle of Jersey; and also the Double Chinese Primrose, raised by me 25 years since. It will perhaps be interesting to you, sir, to see the silver medal awarded to me by the Horticultural Society of London, as I was not much more than a boy then.

In conclusion, there is one other flower I would call your attention to. It is the Lily, or Calla Æthiopica. This is probably the flower alluded to by our Saviour, when he compared it to Solomon—Solomon, the greatest protentate the world ever knew, whose wisdom has never been equaled, living in a superb palace, surrounded and adorned by the famous hanging gardens; and yet, with all these attributes of royalty, our Lord said he was not arrayed as one of these little lilies of the field. And who can look at it without feeling the full force of the remark! What more artistically beautiful, whether we consider the chasteness of the form of the flower or its general appearance, taking blossom and foliage together. I will only further add, that flowers are so associated with us in our every day existence, that life would be monotonous without them.

On motion of Mr. R. G. Pardee, a vote of thanks was passed to Mr. Henderson, for the very interesting and instructive manner in which he treated the subject.

Mr. Isaac Buchanan exhibited a choice collection of rare flowers. Among them were several very choice Camellias, Cacti, Rhododendrons, an Australian plant, called the bottle washer, Lilies, Lælia, &c.

The President said that the Rhododendron is a plant that has been singularly neglected in this country. In England it is called the American plant, and much attention is paid to it there; yet, strange to say, we know very little of it here. It is a wonder that we have neglected such a beautiful ornament even for our city residences. It is a plant that is well adapted to stand the heat of our summers and the cold of our winters.

Mr. Buchanan said that it was an evergreen, and would grow in almost any soil; but in a stiff soil it would stand the heat better than in a light one.

Alderman Ely spoke of the profuse display of flowers that were on the tables. The massive bouquets presented by Mr. Wm. R. Prince, of Flushing, L. I., was worthy of particular notice. He called upon Mr. Mead for some remarks upon them.

Mr. Mead said that he hoped that those who had favored them with such a floral display would be present and give an account of them; but as this time of the year was their busiest season, they could not, perhaps, well attend this meeting. He would therefore, in compli-

ance with the flattering request of Alderman Ely, say something in relation to a few of them.

We have here some fine specimens of the Pansy. This plant exhibits in a peculiar manner the advancement of horticulture in this country. He well remembered when it was called the Johnny Jumper. It then stood up something like the ladies' bonnets did about a year ago. The florist has improved them very much. He had seen some that were almost perfectly round, so that, if laid upon a circle, they would exactly fit the whole circumference. In flowers of this class, the border color should be pure and distinct, and go entirely round the plant. In this respect this flower is a little imperfect. The great trouble in our country is that it is too hot and dry. The Pansy can only be brought to perfection here by artificial means, except in the early spring. If a cool place in the garden is selected, Pansies can be grown with a good deal of perfection; that is, if good seed is obtained. Good seed is hard to be got. That usually sold at the stores will give only some 15 per cent. of good flowers. He spoke somewhat doubtingly, as latterly they gave him good seeds. With good seed there was little doubt that they would yield 75 per cent. If we desire to propagate it, the best way is by cuttings. The amateur will tell you this is difficult, and can be done best by the florist, who is surrounded with all the appliances necessary. Now this is not exactly so; for here is a cutting, and if always cut in this way, there will generally be good plants. (Mr. Mead here took a slip and cut it in the proper way.) After this is done, if the plant is placed in a cool, shady part of the garden in the month of September, and covered with a newspaper, or if the plant is put into a box with some sand and a glass placed over it, it will generally take root. Mr. Buchanan would say that 49 out of 50 would be raised, with all his facilities for propagating this plant; in fact, it is the only way to perpetuate a choice kind, for we can not depend upon the seed to reproduce it. It is a great satisfaction to a person to be able to say that he raised such a plant from a cutting, and it greatly enhances his pleasure; but, notwithstanding this pleasure, it is cheaper to buy the plants from the florist. For about 25 cents we can buy such fine plants as we have here. The Pansy is a free blooming plant, and comes early into flower. I have seen flowers on them before the leaves had attained the size of a ten cent piece. This flower is not only intrinsically beautiful, but it is prized by the ladies quite as much as the Pink is by the men.

The large bouquet which we have here he supposed was made up in accordance with a suggestion that he made at a previous meeting. He took occasion then to say that our professional men made a great mistake in the formation of their bouquets; they are simply an arrangement of color, without form or good taste. He well remembered, many years ago, being on a committee with the late A. J. Downing and some ladies, at the Lyceum of Natural History, where an occasional exhibition was held. On this occasion Mr. Downing said he did not like the style in which the bouquets were put up, and the ladies entirely agreed with him; but one of the ladies picked out a bouquet which she said was well arranged. Mr. Downing looked at it, and said that it was so; and turning to another placed at the other end of the table, said, "Here is a mate to it. I wonder if it was put up by the same person." But as there was no name to either of them, we could not tell; we therefore gave to those two simple bouquets the first prize. But he had not since seen any done up in that way. He had ever since declared war upon them. What have those innocent flowers done that they should be bound together like criminals? Which is the most beautiful, this or that? (holding up examples of each.) He would always condemn this strait-jacket mode. If any exhibition is got up as suggested, he would request that a set of prizes be given for bouquets made up in the natural way, and in this manner we would do away with the strait laced style. The flowers should not be crushed together like a crowd in the street, but they should be arranged in their individual beauty, so as to be seen under as well as on the surface.

Here are some two or three kinds of the Magnolia; one of them is the *M. Soulangiana*, slightly striped; another, *M. obovata*, purple; and *M. Alexandria*, deep crimson, striped. The trees on which these grow are of the Chinese variety, and are generally of medium height, but he has seen some of our native species, macrophylla and others, nearly 100 feet high. The great fault with the Chinese Magnolia is, that its flowers appear before the leaves. If it could be made to flower when

the tree is in leaf, it would be magnificent; but it is very beautiful as it is.

The next flower in the bouquet is the *Mahonia aquifolia*, from the Rocky Mountains. The seeds of this plant were originally brought home by Lewis & Clark. It is a very beautiful evergreen plant. This is a double white flowering Peach from China, one of the best of recent introductions. There are also double crimson, double Rose, and double carnation striped varieties of the Peach, all of them handsome objects for the lawn. Here is a species of Ilex, the English holly, which is very pretty to look at, but very bad to handle, as its leaves are armed with sharp spikes. It is a splendid evergreen, but usually needs winter protection with us. This is the *Dielytra spectabilis*, sometimes called the bleeding heart, a name which he hoped would be discarded. He asked if there was any thing pleasant in the idea of a bleeding heart, yet the flower is exceedingly pretty. It is a hardy herbaceous plant from China. Here is the *Cydonia Japonica*, or Japan quince, a beautiful scarlet flower that opens early in the spring. It is perfectly hardy, and every way desirable.

He wished to speak of the Orchids. This is a Laelia. It is a common notion with many that orchids can only flourish in a high temperature, but he had seen Lycastes, Oncidiums, &c., blooming finely where the temperature was allowed to go down to 45 degrees every night in winter. If this can be done, considerable fuel can be saved at least.

One great drawback to the advancement of Horticulture in this country, is that plants, to sell well, must have a foreign name and reputation. If Mr. Henderson, who raised this beautiful Heliotrope, the Belle of Jersey, had imported it from Europe under the name of the Belle of Lancaster, he would have sold five thousand where he has now sold one. He had seen a great deal of this. He had seen fine flowers in the hands of our florists year after year that could not be sold for want of a proper endorsement. The late George Thorburn was forced once to resort to the expedient of exporting and importing the same flowers to make them saleable here; and where he could not sell a few dozen before at 50 cents, he then sold hundreds of the same plant at a dollar! and now this is done over and over again. We must raise our own seedlings, and seek some means to beget public confidence in them. The best Verbenas, Heliotropes, &c., now in cultivation have been raised in this country.

On motion of Mr. Jireh Bull, a vote of thanks was tendered to the gentlemen who so kindly favored the Society with such a tasteful display of flowers.

The subject of "Early Fruits" was selected for discussion at the next meeting, and Mr. R. G. Pardee was appointed to open it.

Adjourned to Tuesday evening, May 31st, at 8 o'clock.

JOHN W. CHAMBERS, Rec. Sec.

Correspondence.

Mr. Editor,—I wish to gain some information in regard to two of the new kinds of grapes, which I am unable to obtain from those who have them for sale. Can you, and if so, will you, enlighten me?

1st. Creveling.—Is it a wine grape? I have cultivated it, and have fruited it for two seasons. I am so much pleased with its early ripening and its flavor, that I shall plant out all the roots that I can procure this spring. I intend to raise the fruit for market; but there is always a quantity of fruit which must be worked up into wine. Before I lost my Isabella vines by mildew, I sold the fruit readily, and made the remainder into wine with sugar, an article that is now too expensive to be used for wine-making, especially as we can make better wine with other grapes. If, as I believe, we can make wine of the Creveling, the fruit can be raised to a great profit, as fruit ripening from the 1st to 10th September is sure to bring a large price, say 20 to 25 cents per pound in New York, and the wine will pay a considerable portion of the expenses.

2. Adirondac.—I can get no satisfactory replies to my inquiries. Is it hardy?

Mr. Bailey, who propagates it, and has it for sale, may be considered an interested witness; but he says Mr. Witherbee "found an old grape vine," which he (Witherbee) "*supposed to be a wild vine*," and "dug it out." "The next season he discovered *a vine* near the same place." "The next winter *it killed back*," "and since that time he has given it the same treatment as his Isabellas, i. e., pruning, *laying down, and covering every winter*."

Now will Mr. Witherbee give us more particulars? Having sold his interest, he can be admitted as a competent witness. Will he inform us whether, in his opinion, this new vine that killed back is really the product of the wild vine? or did he or some of his family set out any vines on that "strip of ground which he inclosed to enlarge his garden?" We want light, and must have it before we plant extensively. I have examined the leaf of the plant sent out by Mr. Bailey, and must say that, to me, it has the appearance of the Vitis vinifera; and until we have Mr. Witherbee's statement, I am inclined to think it a foreign seedling, which "killed back the following winter." Why did not the supposed wild vine *kill back?* and if it did, what value has it over any other vine, even if grown in a northern climate?

PRATIQUER.

[We have no doubt that the Creveling will make a better wine than the Isabella, for it contains more spirit and grape sugar; still we are not yet prepared to rank it among wine-making grapes. Mr. Merceron and others can perhaps throw some light on this point. In regard to the origin of the Adirondac, we heard lately from a relative of the family, that Mrs. Witherbee raised it in a pot from seed taken from a raisin. If this be so, it will readily account for the tendency to mildew which we hear from many quarters has already developed itself, though this may be owing to other causes. It will also account for the Hamburgh flavor which so much pleases those accustomed to eating foreign grapes. If, however, it originated from a foreign grape in the manner stated by Mr. Witherbee and other members of his family, it can have but little value for general cultivation, and must take its place with the Brincklé, Montgomery, Child's Superb, and similar grapes. We further learn that these facts have been known from the beginning to those interested. It is quite important that they should be made public, and some notice taken of them.—ED.]

EAST ABINGTON, Mass.

MR. MEAD,—*Sir*,—Through the kindness of a friend, I have had the privilege of looking through nearly a year's numbers of the HORTICULTURIST, and must say I have been much pleased with it. There is a certain freshness and adaptedness in its columns that makes it very interesting; and though there are not many more seasons of bud, fruit, and flower for me, being an old man, I yet anticipate much enjoyment from the cultivation of the *Pear*, the Grape, the Peach, and some of the smaller fruits.

The *Pear* and *Grape* are my hobbies, if any thing is. How can any one forego the pleasure of their company. Perhaps an apology is needed, not being a subscriber, but presume you will excuse me, as I am an inquirer, and it seems to be your pleasure to give information.

I want to ask a few questions, and perhaps criticise a little, but you will let *that* go for what it is worth, all well meant.

Will you in your next, or as soon as convenient, give a plain description of the different kinds of houses for fruits and flowers, saying wherein they differ?

I have but a few kinds of grapes as yet, say the Concord, Diana, Hartford Prolific, Delaware, and Rogers's Hybrid No. 15, the last not fruited yet, but looks very promising. I wish to add some three or four kinds, best for the table and market, and according to best accounts, I think Dr. Grant's two new seedlings, the Iona and Israella, with the Creveling, might suit me, but should like your opinion in regard to them and others.

I have read somewhere lately, that it is a good plan, in pruning vines, to cut out the *tendrils;* is it so?

In your July number was an account of the Leon le Clerc (De Laval) Pear, giving so good an account of it that I marked it for a desirable fruit for eating from the hand, as well as for cooking; and as the long keepers that are *good*, and will ripen well, are scarce, I said I must have it; but in the next No. behold it was good for nothing but cooking; so "my bread was all dough."

Then your correspondents make the Brincklé's Orange Raspberry a very tender plant. My experience for 6 or 7 years makes it a hardy kind, and I have never known it to be hurt by the winter yet, and they are very exposed, never having been protected in the least. It is one of the best.

Again, one or two recipes for making grafting wax in the HORTICULTURIST, might as well be a little more simplified. Instead of five or six ingredients, three are all that are required. I have made and used a great deal of it, and recommend it for using with the hand or with a brush, *warm*. Say two parts rosin, one beeswax, tempered with lard. I think I shall have to have your journal this winter, and I want to recommend greater attention to the *king* of fruits, the *Pear*.

Respectfully yours,

INQUIRER, JR.

[We are very much gratified with your good opinion, and hope you may live to enjoy many seasons yet of "bud, fruit, and flower." We will soon give you the information you desire. You can not do better than add to your list the grapes you have named. It is a good plan to cut off the tendrils of the vine. Many of our correspondents will not agree with you in regard to the hardiness of the Brincklé's Orange, but all will agree with you in regard to its goodness. It is the best flavored Raspberry we have. We shall be very glad to hear from you again.—ED.]

BLOOMINGTON, Ill., Feb. 2d, 1864.

EDITOR OF THE HORTICULTURIST:

Dear Sir: "Remember the 1st of January, '64."

"Trim and cover the vines in November."

This shall be the inscription of a large sign over the main avenues of my vineyards. I wish every vineyardist would do the same, as this inscription will always bring the great destruction before his mind. Yes, Mr. Editor, we ought to be whipped, because almost every one of us knew, almost by instinct, that we would have a hard winter, for not covering our vines. I have 10,000 vines for fruiting, mostly on "lath trellises," such as Mr. Knox speaks of. Now all those vines could have been covered with earth, say 4 shovels full each, in one week's time by three men, at a cost of $20. Yes, if I only had knocked the trellises down on the beginning of the storm, (which I could have done with my gardener in the course of five or six hours,) and let the vines be covered with the trellises, to which they were fastened, I would have saved all the crop and several thousand dollars in money, besides the most mortifying feeling that I could have prevented this loss.

The wood alone of my vines to be trimmed off was worth 1,000 dollars. Some 50,000 No. 1. layers of the best varieties would have been made, and most all the fruit for 2 or 3,000 gallons of wine gone, and the form of many vines destroyed for years. That is the picture of my so-called "Model Vineyard." As I do always for "experiment," I covered with a few forkfuls of litter the most of my Herbemonts, (you know a very tender vine,) but they are all good to-day. I covered, also, some Blood's Black, Diana, Traminer, Lincoln, Bird's Eye, Louisa, Mary, Anna, Hartford, North Carolina Seedling, Brincklé, Rogers's Hybrids, some 8 numbers, Allen's, Maxatawny, Baxter, Perkins, and about 30 other sorts, (I have over 160 varieties of vines,) and not one of them is injured. They also stood all the cold weather before

Christmas. Catawbas I trimmed Dec. 23d, and threw the wood on the ground. I found them last week uninjured.

As this little report is written in haste, I will only speak ramblingly, but will give you, if you or your readers desire, a full statement of the case, with some practical hints.

Taylor's Bullitt, a white grape, is the hardiest of all my vines. The wood exposed to the weather, even the wood on the many hundred of layers I raised, is perfectly sound. Next may come Concord, a very rambling grower, but wood hard as iron; beats Hartford Prolific in hardiness. I have 1,000 of Concord vines for bearing, and they have done well in fruiting; besides, I raised from almost every vine from 10 to 50 strong old wood layers, and it did not hurt the vine at all, as far as I can see now. Therefore, Mr. Editor, I call the Concord a good acquisition.

Delaware is very tender, but Allen's Hybrid and Rogers's Hybrid more so. Catawba and Isabella are all gone; but Clinton stands very well. In a short time I will give you a correct list. From Herman we have bad news; from southern Illinois very bad news; and so from Nauvo, Ill. In all, this winter has done more harm than any winter before, and more than the most of us think yet.

DR. H. SCHRODER.

[This, on the whole, is the most deplorable picture that we have yet seen. We sympathize with you most sincerely. Those who live in localities subject to such trying changes would act wisely in covering their vines; or, if this be inconvenient or too much trouble, let them, as we have often suggested, cut their vines loose, and simply lay them on the ground. We shall be very glad to have the full statement and practical hints.—ED.]

STATE OF MINNESOTA,
FALLS OF ST. ANTHONY, Mch. 4, '64.

EDITOR HORTICULTURIST,—There are three early grapes (besides the Delaware) that would seem, from the descriptions given of them, to be adapted to the extreme northern limit of the grape zone, viz., the Adirondac, the Israella, and the Creveling. All are said to be good. I want your judgment as to how they compare with each other in respect to flavor, size, earliness, hardiness, and productiveness, especially flavor.

In speaking of hardiness, I do not refer to exemption from mildew or rot, which, as far as my observation goes, never affect *any* grape in this dry climate; but capacity to endure cold. Some varieties winter-kill here, even when protected.

Is there any good early variety that you would add to the above list? H.

[We have hardly seen enough of these grapes to say whether they are sufficiently hardy to endure the climate of Minnesota. We have known the Israella and Creveling longest. They are perfectly hardy with us, but we are not prepared to say that they would be so with you, though we think they may be. We are still less prepared to speak of the Adirondac, the buds on our own vine being winter killed, the vine showing no signs of life up to the present time, while all our other vines have shoots from one to two inches long, with the single exception of the Yeddo, which we think is also winter killed, as it is in several other places. The Adirondac, Israella, and Creveling are not high-flavored grapes. The Israella is the sweetest and the Creveling the most spirited, the Adirondac, in this respect, taking its place between them. The Israella and Adirondac are the most tender fleshed. They are all of them about the same size. We have no reliable data for knowing how early the Adirondac is, but the Israella is earlier than the Creveling. In regard to productiveness, there is little difference between the Israella and Creveling, as we have thus far seen them. The Adirondac we have not seen in fruit. In regard to

these grapes, it may be safely said, that their exact earliness and hardiness remain to be proved. You ought to try them to prove these points. We know of no other early grape that we would add to the list. —Ed.]

Editor Horticulturist,—The Horticulturist has often explained how to prune *young* pear trees, but has not, I think, taught us concerning *large* ones. I have a number that are about 15 to 25 feet in height, and have always been carefully pruned into perfect pyramids; but now, from their size and growth, it is almost impossible to go over them as formerly. Will it do to leave them now to take care of themselves? Or what is the true course? Truly yours, Æstivalis.

New Bedford, Feb. 15, 1864.

[You do not say whether your trees are now well furnished with fruit spurs, or whether they are making too much wood. Pear trees that have been pruned as pyramids till they are 15 to 25 feet high, should be in condition to need but little pruning. We will suppose they are in good shape and condition, and well furnished with fruit spurs. In that case, the knife is mainly to be withheld, except to cut out some misplaced shoots, or to shorten in some leading shoot that has made too rampant a growth. Any laterals that take a notion to become leaders should be pinched in during the month of June. On the whole, trees such as we take yours to be, require but little pruning, and that mostly with the thumb nail in the month of June. —Ed.]

Editor Horticulturist,—What say you to this bit of nomenclature? I think much convenience, confusion, and disappointment, indicate the propriety of special terms in speaking and writing about grape and other plants. Here is the attempt to substitute a name in lieu of a phrase, like, *Seedling*, a plant propagated from seed. *Budling*, a plant propagated from a bud. *Bibudling*, a plant propagated from 2 buds. *Cutling*, a plant propagated from a cutting. *Suckerling*, a plant propagated from a root-bud. *Graftling*, a plant propagated from a graft. *Shootling*, a plant propagated from a shoot. In describing grape vines, this last is usually called a Layer, which I would drop.

Yours ever, Royce.

[While it must be admitted that some of the phrases now in use are indefinite enough, innovations are looked upon with distrust, even where they are felt to be needed. Some of the names presented by our correspondent are definite enough. But we lay the subject before our readers for the purpose of eliciting criticism, and will not forestall it by remarks of our own at present.—Ed.]

Columbus, O.

Peter B. Mead, Esq.

Dear Sir: Please name the best four varieties of foreign Grapes for a warm vinery, and much oblige a friend.

Buckeye.

[For our own use we should plant Bowood Muscat, Chasselas Musqué, Grizzly Frontignan, and Black Hamburgh. We prefer to plant chiefly grapes that are *high* flavored, which all the above are except the Hamburgh.—Ed.]

Editor Horticulturist,—I have, during the last two years, succeeded tolerably well in raising plums, by pursuing the well-known method of jarring the trees, and collecting the curculios on a sheet, and then killing them. Recently a gentleman, whose statements I usually credit, has informrd me that it is only necessary to jar the trees every morning about sunrise, and allow the insects to fall on the ground. He says they will remain on the ground all the day, and will not ascend to the trees until night, and that they will not sting the plums during the night. He says he has pursued this method for some years, and has never failed to raise a large crop of fruit.

If this plan will do, it requires but a small amount of labor to preserve this fruit. What is your opinion of it?

Very respectfully,

INDIANAPOLIS.

[This presents the Little Turk in an aspect new to us, and we must award to your friend the credit of being a close observer. Though it be perfectly true that the Curculio will not ascend the tree again till night, still your method of using the sheet is much the safer one; for you have the satisfaction of knowing, that when you have once knocked his Turkship down, he will not get up the tree again, even at night. What is the use of knocking him down twenty times, when you can do it once for all? In regard to the Curculio, Rose Bug, *et omne genus, thorough* is the word. "Kill 'em dead."—ED.]

MUSKEGO CENTER, Wis., Feb. 5, 1864.

I wish to ask you a question in regard to some Dwarf Pear trees which I purchased last April. What will prevent rabbits from eating or gnawing the bark? I heated some tar, and while soft, applied it on the parts injured. Have I injured them in so doing? Will their growth be thrown back or hindered in consequence of injuries received? In some places they have eaten the new growth; in others the bark completely around the body of the tree. Hoping to receive an answer from you soon, I remain,

Yours respectfully,

F. HARRISON.

[If you have used common tar, the risk to the trees is not much. It would be better to tar muslin, and tie it around the trees during the winter. Banking the trunks with earth is a good protection, and easily applied. If we were much troubled with rabbits, we should go to the trouble of preparing protection for all our trees; and tarred muslin is one of the simplest you can use. Do not put the tarred side next the tree, and avoid gas tar, which is very hurtful. The gnawed parts should be cut smooth, and covered with the preparation described by Horticola in a former number. They will soon heal over.—ED.]

DEDHAM, Mass.

PETER B. MEAD, Esq.,

Dear Sir:—As a subscriber to your valuable Journal for several years past, I take the liberty of asking you where I can get the different Magnolias grafted or budded on the Acuminata stock, as I recollect reading in some journal of their much greater hardiness and vigor so worked, but have not seem them so advertised in catalogues. Do you think the Magnolia macrophylla and the Halesia *Diptera* hardy in the vicinity of Boston? and where can I get the last-mentioned shrub *true* to name? By answering these questions you will greatly oblige a constant reader.

W. L. F.

[The Messrs. Parsons used to have the Magnolia so worked, and we presume others have. They ought to advertise them. We think the Magnolia macrophylla and Halesia hardy in the vicinity of Boston. Any reliable nurseryman ought to be able to furnish the Halesia true to name, and scarcely any nursery is without it.—ED.]

EDITOR HORTICULTURIST,—The cold weather of the 1st instant has killed all of our peaches and fine cherries. The only variety I have been able to find live buds on is the common Morello, and they are partly killed. It has also injured young cherry trees in the nursery rows, and I fear our grape vines are very much injured, so that it will about spoil the crop. How much more damage it has done I can not tell, as I have not examined other things, but the opening of spring will tell a sad tale.

LEWIS NICHOLSON.

EAST ROCKPORT, Ill.

[So it is from all our western and northwestern country; but, fortunately, around us the damage has been comparatively small.—ED.]